

Procedures and Guidelines

DIRECTIVE NO. 562-PG-8700.2.7 Rev A

EFFECTIVE DATE: 08/30/1999

EXPIRATION DATE: 08/30/2004

APPROVED BY Signature: original signed by

NAME: Robert Lebair

TITLE: Branch Head

Responsible Office: 562/Component Technologies and Radiation Effects Branch

Title: Preparation of S-311 Electrical Electronic and Electromechanical (EEE) Parts Procurement Specifications

P1. PURPOSE

This specification prescribes the standard formatting and general preparation requirements for engineering drawings for Electrical Electronic and Electromechanical (EEE) Parts prepared by the Component Technologies and Radiation Effects Branch (Code 562).

P2. REFERENCE

MIL-I-45208, Inspection System Requirements (Cancelled)
EIA-625, Requirements for Handling Electrostatic-Discharge-Sensitive Devices
GPG 8700.2, Design Development
562-PG-8700.2.5, Incorporation of S-311 specifications and standards.

P3. SCOPE

The specifications covered by this procedure include those for the procurement, screening, qualification and testing of EEE parts. This specification covers new specifications and the update and revision of old S-311 specifications incorporated in accordance with 562-PG-8700.2.5

P4. DEFINITIONS

N/A

P5. AUTHORITIES AND RESPONSIBILITIES

The Code 562 Documentation Administrator is responsible for oversight of this process and for the detailed activities defined in P8. The Document Administrator will be appointed by the Code 562 Branch Head.

P6. CANCELLATION

P-311-526 Preparation of EEE Part Procurement Specification

P7. RECORDS

Quality Record Title	Record Custodian	Retention
S-311 Specification Activity Log	OSSMA Information Center Librarian	Until no longer needed
Signed Original of S-311 Specifications	OSSMA Information Center Librarian	Project Completion or Until no longer needed
Revision Notice Form	OSSMA Information Center Librarian	Project Completion or Until no longer needed

P8. IMPLEMENTATION

8.1 Part Identification Number (PIN). A PIN to identify the parts, items or materials shall be defined. PIN's shall be kept short and shall not exceed 20 characters under any circumstances. The Office of System Safety and Mission Assurance (OSSMA) Information Center Librarian shall assign the specification number and detail sheet number (if applicable) and record the information on the S-311 Specification Activity Log, Form 562-PG-8700.2.7.5. This specification and /or detail sheet number shall be used in the PIN as shown in the following paragraphs. The engineer responsible for preparing the document will assign the dash numbers for individual parts.

8.1.1. For a stand-alone specification, the PIN shall be as follows:

G 311PXXX - XXX

Where:

- “G” is the GSFC Standard Prefix
- “311PXXX” is the specification number
- “ - XXX” is the dash number for an individual part type. An alpha code may replace the dash.

8.1.2. For detailed specifications or specification sheets, the PIN shall be as follows:

G 311PXXX/XX - XXX

Where:

- “G” is the GSFC Standard Prefix
- 311PXXX is the base specification number
- “/XX” is the detailed specification sheet number
- “ - XXX” is the dash number for an individual part type. An alpha code may replace the dash.

8.2 DETAILED FORMAT AND CONTENT REQUIREMENTS

8.2.1 The specification format shall be in accordance with Appendix B.

8.2.2 A specification shall contain six numbered sections, titled and numbered as shown. A table of contents shall not be used but an alphabetical index may be used for lengthy documents to provide ready access to the contents. If used, an index is placed at the end of the specification, following any appendices. The pages are numbered continuously following the last page of the basic specification or appendix, as applicable.

1. SCOPE.
2. APPLICABLE DOCUMENTS.
3. REQUIREMENTS
4. QUALITY ASSURANCE PROVISIONS.
5. PACKAGING.
6. NOTES (if applicable)

8.2.3. Scope

A short statement defining the scope of the specification.

8.2.4 Applicable documents

Documents found in sections 3, 4, and 5 shall be listed here and "standard" paragraphs shall be as follows:

"2. APPLICABLE DOCUMENTS."

"2.1 Documents. The following documents, of the issue in effect on the date of invitation for bid or request for proposal, form a part of this specification to the extent specified herein."

"2.2 Order of precedence. In the event of conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been granted."

8.2.5 Requirements

Requirements shall be tailored to meet NASA/GSFC unique requirements along with the individual part type's requirements, as applicable. The following "standard" paragraphs shall be included in every procurement specification.

"3.1 Qualification. (Parts) furnished to this specification shall be product that has been granted qualification approval by NASA/GSFC. Qualification approval shall be based on the following:"

CHECK THE GSFC DIRECTIVES MANAGEMENT SYSTEM AT

<http://gdms.gsfc.nasa.gov/gdms> TO VERIFY THAT THIS IS THE CORRECT VERSION PRIOR TO USE.

“3.1.1 Design and source approval. Prior to qualification, the manufacturer's facility shall be subjected to survey at the option of GSFC. Compliance with MIL-I-45208 or equivalent is expected. In addition, the history and detailed engineering of the specific (part) design will be reviewed, as will as the documented manufacturing and quality control procedures. Only those source(s) approved in the design and source phase shall be eligible for qualification or award of contract under this specification. Source approval and design approval do not constitute part qualification or an equivalent thereof.”

“3.1.2 Part qualification. The individual (part) shall be product, which has passed the qualification inspection requirements of this specification. This requirement may be satisfied by passing the qualification inspection (see 4.X).”

“3.1.3 Requalification. Requalification shall be imposed following any change in design, manufacture, materials or quality control procedures as reviewed and approved during qualification. Requalification shall be required if it is demonstrated that any stipulation initially presented in the manufacturer's certification no longer apply. Inspection discrepancies which are not suitably explained by failure analysis, or by other means, shall also be considered a basis for disqualification by GSFC.”

8.2.6 Quality Assurance Provisions

“4.1 Responsibility for inspection. The manufacturer is responsible for the performance of all inspection requirements, as specified herein, using their own or any other suitable facility acceptable to Goddard Space Flight Center (GSFC), unless specifically stated otherwise. In instances where the manufacturer does not possess the necessary test equipment or facilities to perform a test, GSFC may elect to perform the test. Upon receipt of product, Goddard reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to verify conformance to prescribed requirements.”

“4.2 Classification of inspection. Inspection requirements specified herein are classified as follows:

- a. Qualification Inspection (see 4.X).
- b. Quality Conformance Inspection (see 4.Y).”

8.2.7 Packaging

“5.1 For acquisition purposes, the packaging requirements shall be as specified in the contract or order. Handling and packaging for Electrostatic Discharge (ESD) protection shall be in accordance with EIA-625. The use of "Pink Poly" bags should be avoided. Cross-linked, black foam packing is a preferred material.”

8.2.8 Notes

“6.1 Ordering data. Acquisition documents should specify the following:

- a. Number, title, and date of this specification.
- b. Goddard Part Number
- c. Quantity”

"6.2 Qualification provisions. With respect to product requiring qualification, awards will be made only for product which has been tested and approved by GSFC before the time for opening of bids. The attention of the suppliers is called to this requirement: manufacturers should arrange to have qualification tests made on product which they propose to offer to GSFC to become eligible for awards of contracts or orders for product covered by this specification. The manufacturer shall bear the cost of qualification inspection to this specification. Information pertaining to qualification of product may be obtained from the activity whose address is listed in 6.x."

"6.3 NOTICE When GSFC drawings, specifications, or other data are sent for any purpose other than in connection with a definitely related GSFC procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever. The fact that GSFC may have formulated, furnished or in any way supplied said drawings, specifications, or other data, is not to be regarded by implication or otherwise as in any manner licensing the holder or any person or corporations, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto."

“6.4 The identification of the Preparing Activity shall be as follows:

"Custodian:
Goddard Space Flight Center
Greenbelt, Maryland 20771.

ATTN: Document Administrator Code 562"

8.3 REVISIONS

Specification revisions shall be prepared and processed in the same manner as a new specification, or by Revision Notice Form PG-562-8700.2.7.3 in accordance with Appendix C.

8.4 RECORD KEEPING

The OSSMA Information Center Librarian is responsible for overall record keeping for this system. The quality records involved are shown in paragraph 7. Filing of the records will be in both hardcopy and electronic forms.

CHECK THE GSFC DIRECTIVES MANAGEMENT SYSTEM AT

<http://gdms.gsfc.nasa.gov/gdms> TO VERIFY THAT THIS IS THE CORRECT VERSION PRIOR TO USE.

- 8.4.1 The Librarian assigns document numbers for new documents and shows these transactions in the S-311 Specification Activity Log, Form 562-PG-8700.2.7.5 together with the date the document number was assigned, the title of the document and the originator of the activity.
- 8.4.2 Revision Notices, Forms 562-PG-8700.2.7.3 are filled out by the originator of the action and submitted to the Librarian for distribution to the appropriate reviewers. The Librarian retains a copy on file and records the transaction in the Activity Log
- 8.4.3 Signed Master copies of S-311 specifications are submitted to the Librarian for filing.
- 8.4.4 Upon receipt of the Master, the Librarian records the date of publication in the Activity Log.
- 8.4.5 The Librarian will supply a copy of the document to Information Handling Services for inclusion in their electronic specification system.

APPENDIX A

SPECIFICATION TITLE PAGE FORMAT AND BLOCK ENTRIES for Form 562-PG-8700.2.7.1.

BLOCK 1. Symbol. This is the current revision level of the document. This block is completed by the Office of System Safety and Mission Assurance (OSSMA) Information Center Librarian.

BLOCK 2. Description. This is used to briefly explain the actions taken at this revision of the specification and shall include the RN number for the change (if any). The OSSMA Librarian completes this block.

BLOCK 3. Date. This date shall be the date of release of the initial specification or revision notice.

BLOCK 4. Approval. This is for the approval of the Code 562 Document Administrator who authorizes the release of the specification. This block is the only approval required for revisions after initial release of the document.

BLOCK 5. Sheet Revision Status. The Originator shall record individual sheet revision status.

BLOCK 6. Federal Supply Class (FSC). The originator shall complete this block with the appropriate FSC for the given part type.

BLOCK 7. Originator. The originator's name, affiliation and signature shall be in this block. The date of completion shall also be included in the space provided.

BLOCK 8. Code 562. The Code 562 person responsible for the specification shall review and approve it; this is normally a commodity specialist knowledgeable in the particular part type. The name and signature of the approver and date of approval shall be in this block

BLOCK 9. 562 Configuration Control. This block is signed and dated by the Code 562 Document Administrator and serves as the official approval for release of the document.

BLOCK 10. Title. The specification title shall be in this block. The originator shall assign the appropriate nomenclature.

BLOCK 11. S-311 Specification number. This number shall be in accordance with (6.1). The originator is responsible for this block.

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REVISIONS

SYMBOL

DESCRIPTION

DATE

APPROVAL

SHEET REVISION STATUS

SH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REV																				
SH	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REV																				

APPROVALS

DATE

FSC:

ORIGINATOR:

Title:

CODE 562:

CODE 562 CONFIGURATION CONTROL:

S-311-P-



**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND 20771**



CAGE CODE: 25306

Form 562-PG-8700.2.7.1

CHECK THE GSFC DIRECTIVES MANAGEMENT SYSTEM AT

<http://gdms.gsfc.nasa.gov/gdms> TO VERIFY THAT THIS IS THE CORRECT VERSION PRIOR TO USE.

APPENDIX B

SPECIFICATION CONTINUATION PAGE AND TEXT FORMAT for Form 562-PG-8700.2.7.2.

This appendix provides the standard form, format and text requirements for the Continuation Pages (Sheets), for Form 562-PG-8700.2.7.2.

1.0 TEXT

- Font: Times New Roman
- Font Size: 12

2.0 Text Paragraph Format

1.0 The main paragraph number shall begin at the left margin, followed by the paragraph title in capital letters with no punctuation.

1.1 Sub-paragraphs. All sub-paragraphs numbers shall begin at the left margin and shall be followed by the underlined sub-paragraph title (first letter capitalized only) followed by a period. Two spaces shall separate the title and the first sentences within a sub-paragraph. All sub-paragraphs shall be aligned with the first letter of the sub-paragraph title.

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REV

Form 562-PG-8700.2.7.2

APPENDIX C

REVISION NOTICE, FORM 562-PG-8700.2.7.3

(This information may be copied onto the back of form 8700.2.7.3)

BLOCK 1 Distribution shall be as noted by the originator, and shall be executed by the OSSMA Librarian.

BLOCK 2 Revision Notice number. This RN number shall be assigned by the OSSMA Librarian from the RN logbook, and is completed by the originator.

BLOCK 3 Specification number. This block is for the specification being revised, and is completed by the originator.

BLOCK 4 Revision. The originator shall complete this block with the current revision of the specification.

BLOCK 5 Specification Title. The originator shall complete this block with the full title of the specification.

BLOCK 6 Actions. This block is for the drafting the proposed changes required to the specification.

BLOCK 7 Reason. The originator shall briefly explain the reasons for the proposed specification change(s).

BLOCK 8 Originator. This block is for the RN's originator, and shall include the originator's name, phone extension, and RN origination date.

BLOCK 9 Rev to. This block is for the new revision of the specification, and shall be completed by the OSSMA Librarian.

BLOCK 10 Approvals. The following signatures and dates are required for RN release:

A. Code 562. The Code 562 person responsible for the specification shall review and approve it; this is normally a commodity specialist knowledgeable in the particular part type. The name and signature of the approver and date of approval shall be in this block.

B. 562 Configuration Control. This block is signed and dated by the Code 562 Document Administrator and serves as the official approval for release of the document.

BLOCK 11 Vault Administrator. OSSMA Librarian's signature verifying the release of the-revision notice.



BLOCK 12 Rel Date. This date is the release date of the RN to the vault. The OSSMA Librarian completes this block.

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1. DISTRIBUTION	NAME	CODE	NAME	CODE	 COMPONENT TECHNOLOGIES AND RADIATION EFFECTS BRANCH (CTRE) CODE 562	2. RN NUMBER	
3. SPECIFICATION NUMBER S-311-P-					4. REVISION		
5. SPECIFICATION TITLE							
6. ACTIONS							
7. REASON							
8.. ORIGINATOR			EXT.	DATE	10. APPROVALS		
9. REV TO							
Form 562-PG-8700.2.7.3							
			 Goddard Space Flight Center Greenbelt, MD 20771		A. CODE 562		DATE
					B. CODE 562 CONFIGURATION CONTROL		DATE
					11. VAULT ADMINISTRATOR		12. REL DATE

APPENDIX D

REVISION NOTICE CONTINUATION SHEET, FORM 562-PG-8700.2.7.4

(This information may be copied onto the back of form 8700.2.7.4)

BLOCK 1 Specification Title. This block shall contain the nomenclature from the original specification.

BLOCK 2 Specification Number. This block shall contain the number and revision letter of the original specification

BLOCK 3 Sheet numbers. This block is to be completed by the originator.

BLOCK 4 RN number. The revision number shall be in accordance with 6.1.1, and shall be completed by the originator.

BLOCK 5 Actions. For continuation of the action description in Block 6 of Form 562-PG-8700.2.7.4.

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1. SPECIFICATION TITLE	2. SPEC NUMBER	3. SHEET OF	4. RN NUMBER
5. ACTIONS			
Form 562-PG-8700.2.7.4			

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CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
Baseline	09/30/1998	Initial Release
A	08/30/1999	Reformatted in accordance with current PG template. Added record table in paragraph 7 Added S-311 Specification Activity Form 562-PG-8700.2.7.5 Revised paragraph 8.1 to reference form 562-PG-8700.2.7.5 Added paragraph 8.4